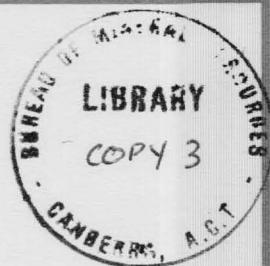


COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

RECORDS 1969/28



INSPECTION OF WHITE CLAY DEPOSIT, JERVIS BAY, A.C.T. 1968

by

D.E. Gardner

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INTRODUCTION

In response to a request from the Department of the Interior, Canberra, a deposit of white clay near Huskisson Trigonometrical Station, $1\frac{1}{2}$ miles west of the Jervis Bay Naval College, was inspected on 12th September, 1968. The purpose of the inspection was to determine the type of the deposit, and its possible extent. The locality is shown on a geological map (Plate 1, based on Perry and Dickins, 1952, and on a larger scale on a topographical map (Plate 2).

Two other deposits of similar white clay are known in the general area, one on the southwestern side of the aerodrome, and the other southeast of it, near Telegraph Creek. The southwestern deposit (Smith *et al.*, 1948) is flat-lying and tabular; it has been exploited for many years. The southeastern deposit (Dickins, 1955) is too small at the surface to be of commercial interest.

TYPE OF DEPOSIT

The clay is residual, ^{and} has formed by weathering of a dyke, presumably of dolerite. The dyke is 12 to 20 feet wide, and at least 1,000 feet long; the strike is 310 degrees magnetic and the dip is believed to be vertical, or nearly so. The wall rock consists of sandstone of Permian age. Probably the deposit extends a considerable distance northwest and southeast from the locality where it has been exposed by stripping of overburden. The prospective leaseholders believe that the deposit extends at least to Caves Beach Road, where they have located white clay by augering. If this is correct the known length of the deposit within Commonwealth Territory is 4,700 feet. The depth of weathering, and hence the depth of useful clay, is not known; augering, by hand, has been carried to depths of 20 feet.

COMPOSITION AND PROSPECTIVE USES

X-ray diffraction analysis* indicates that the clay is a pure kaolinite. As such it should be of value in the manufacture of high-grade earthenware and porcelain. Other possible uses are in the paper, paint, and rubber industries.

* Bureau of Mineral Resources Petrological Laboratory: Analyst,
C.H. Berryman

WORKING THE DEPOSIT

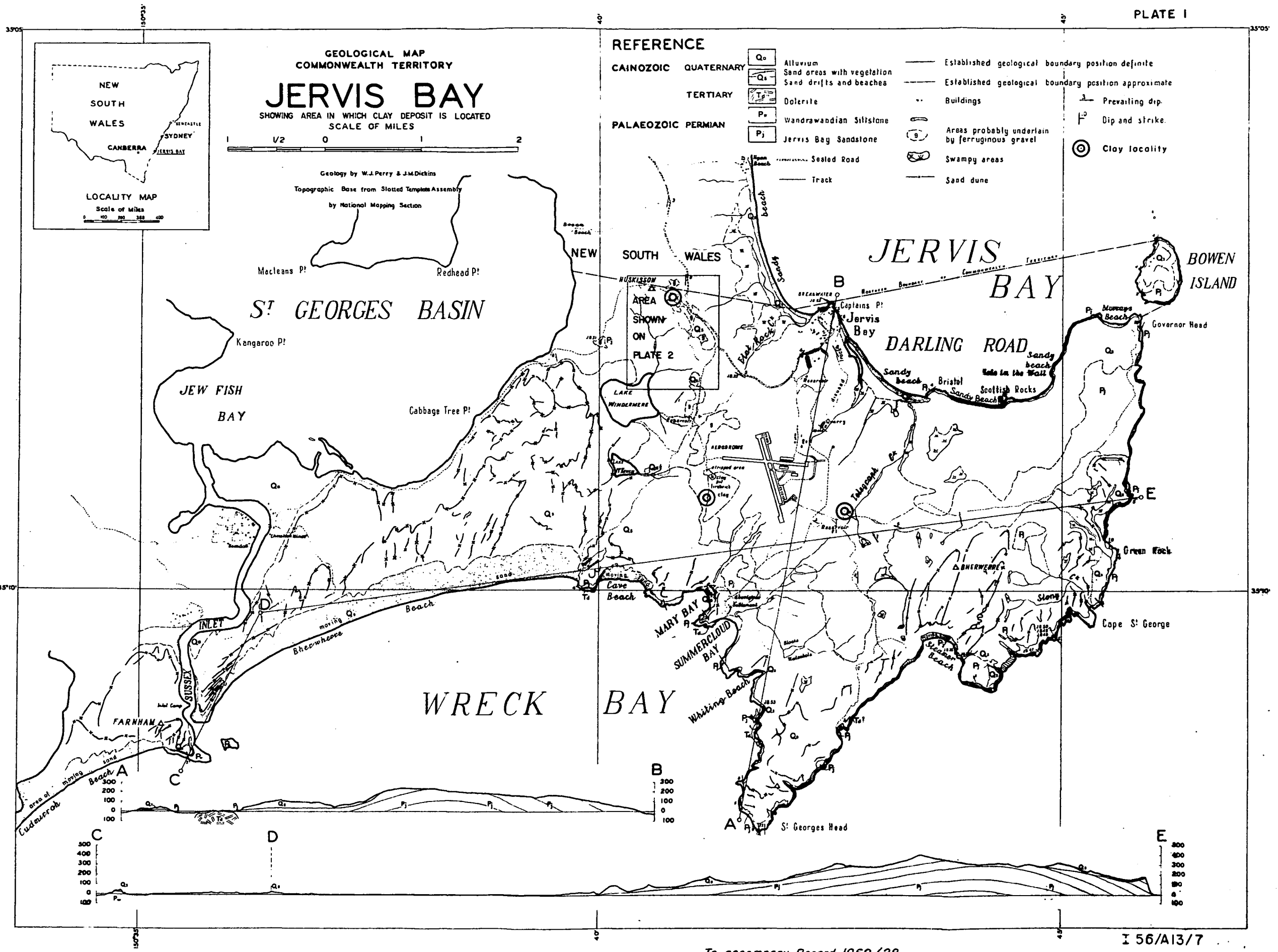
The deposit would be suitable for working by simple mechanical equipment, such as a front end loader. To permit free draining of the workings, a pit should be opened up downslope to the southeast, possibly at an elevation below R.L. 200 feet; the pit could be worked upslope towards the northwest where, near Huskisson Trig., its surface elevation is about 300 feet. The deposit appears to maintain a constant strike, and its extension beneath the overburden, of sandy soil and ferruginous gravel, should be readily located by augering.

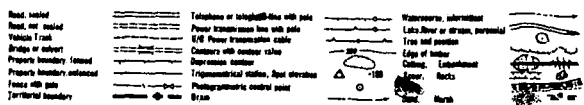
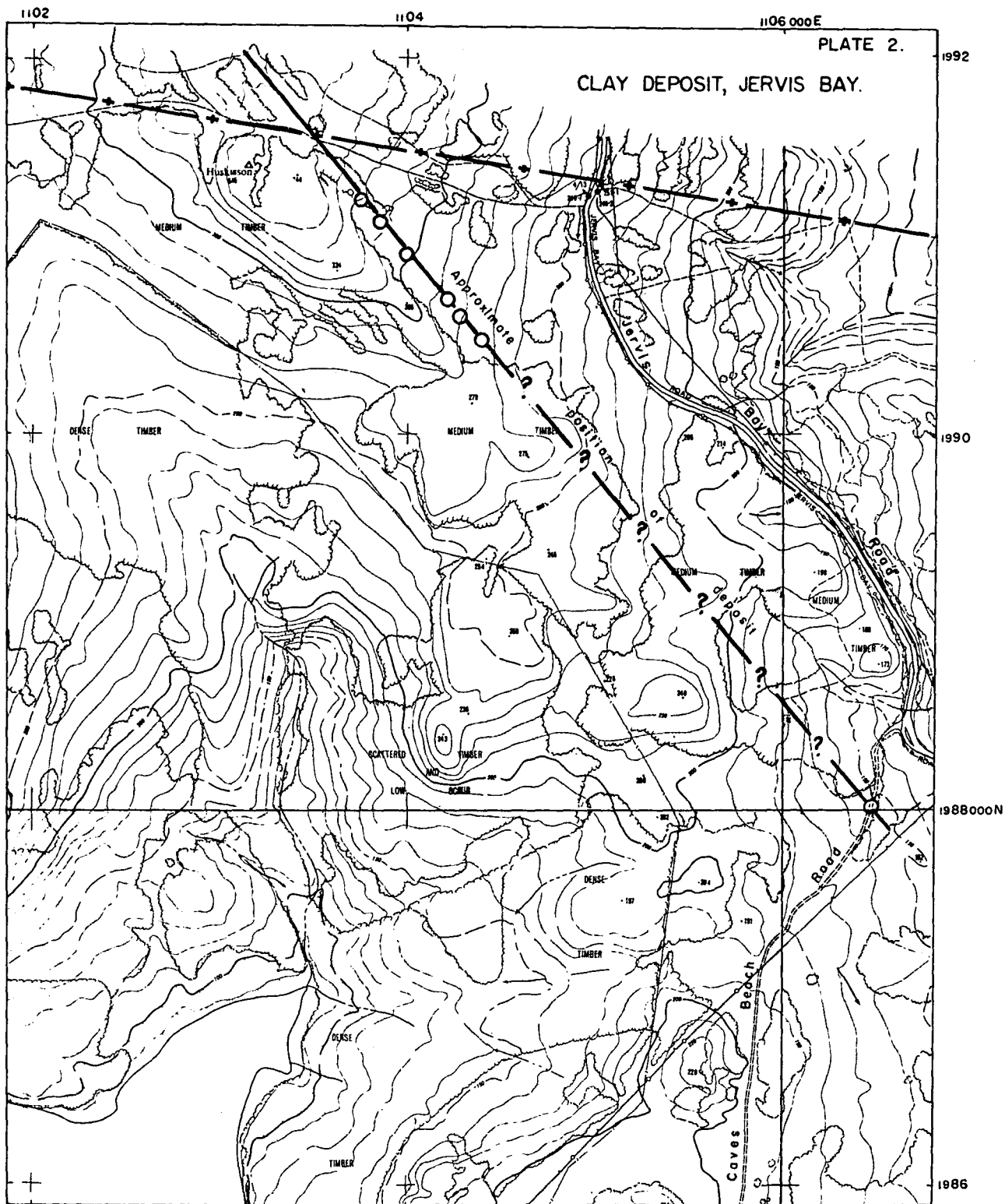
POSITION OF THE DEPOSIT IN RELATION TO CULTURAL FEATURES

The deposit is separated by a watershed from Lake Windermere, which provides the domestic water supply of the Jervis Bay area. To the northwest, a short distance past the border of the Commonwealth Territory, the deposit passes beneath an underground cable of the P.M.G. Department. Southeast from the vicinity of Huskisson Trig., at least as far as Caves Beach Road, the assumed extension of the deposit passes through unimproved country which is free from electric cables and pipelines.

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0 400 800 FEET

○ Auger hole in clay deposit

To accompany Record 1969/28

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